SHARP

EL-509V EL-509VH
EL-531V EL-531VH

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03HGK (TINSZ0423TH03)

(1) ▲ ▼

①3(5+2)=	ON/C 3 (5 + 2) =	21.
②3×5+2=	3 × 5 + 2 =	17.
③3×5+3×2=	3 × 5 + 3 × 2 =	21.
→ ①	2ndF ▲	21.
→ ②	▼	17.
→ ③	▼	21.
→ ②	▲	17.

(2) + − × ÷ ( ) +/− Exp

45+285÷3=	ON/C 45 + 285 ÷ 3 =	140.
$\frac{18+6}{15-8}$=	(18 + 6) ÷ (15 − 8) =	3.428571429
42×(−5)+120=	42 × +/− 5 + 120 = *1 (5 +/−) *1	−90.
(5×10³)÷(4×10⁻³)=	5 Exp 3 ÷ 4 Exp +/− 3 =	1250000.

(3)

34+57=	34 + 57 =	91.
45+57=	45 =	102.
68×25=	68 × 25 =	1700.
68×40=	40 =	2720.

(4) sin cos tan sin⁻¹ cos⁻¹ tan⁻¹ π DRG hyp arc hyp ln log eˣ 10ˣ x⁻¹ x² √ yˣ ˣ√ ³√ n! nPr nCr %

sin60[°]=	ON/C sin 60 =	0.866025403
$\cos\frac{\pi}{4}$[rad]=	DRG cos (π ÷ 4) =	0.707106781
$\tan^{-1}1$=[g]	DRG 2ndF tan⁻¹ 1 = DRG	50.
(cosh 1.5 + sinh 1.5)² =	ON/C (hyp cos 1.5 + hyp sin 1.5) x² =	20.08553692
$\tanh^{-1}\frac{5}{7}$ =	2ndF arc hyp tan (5 ÷ 7) =	0.895879734
ln 20 =	ln 20 =	2.995732274
log 50 =	log 50 =	1.698970004
e^3 =	2ndF eˣ 3 =	20.08553692
$10^{1.7}$ =	2ndF 10ˣ 1.7 =	50.11872336
$\frac{1}{6}+\frac{1}{7}$=	6 2ndF x⁻¹ + 7 2ndF x⁻¹ =	0.309523809
$8^{-2} - 3^4 \times 5^2$ =	8 yˣ +/− 2 − 3 yˣ 4 × 5 x² =	−2024.984375
$(12^3)^{\frac{1}{4}}$=	12 yˣ 3 yˣ 4 2ndF x⁻¹ =	6.447419591
$\sqrt{49} - \sqrt[4]{81}$ =	√ 49 − 4 2ndF ˣ√ 81 =	4.
$\sqrt[3]{27}$	2ndF ³√ 27 =	3.
4! =	4 2ndF n! =	24.
$_{10}P_3$ =	10 2ndF nPr 3 =	720.
$_5C_2$ =	5 2ndF nCr 2 =	10.
500×25%=	500 × 25 2ndF %	125.
120÷400=?%	120 ÷ 400 2ndF %	30.
500+(500×25%)=	500 + 25 2ndF %	625.
400−(400×30%)=	400 − 30 2ndF %	280.

(5) DRG▸

90°→ [rad]	ON/C 90 2ndF DRG▸	1.570796327
→ [g]	2ndF DRG▸	100.
→ [°]	2ndF DRG▸	90.
$\sin^{-1}0.8$ = [°]	2ndF sin⁻¹ 0.8 =	53.13010235
→ [rad]	2ndF DRG▸	0.927295218
→ [g]	2ndF DRG▸	59.03344706
→ [°]	2ndF DRG▸	53.13010235

(6) ALPHA RCL STO M+ M− ANS

A=56	ON/C 56 STO A	56.
B=68	68 STO B	68.
A÷2+B×4=	2ndF ALPHA A ÷ 2 + 2ndF ALPHA B × 4 =	300.
	ON/C 8 × 2 STO M	16.
24÷(8×2)=	24 ÷ 2ndF ALPHA M =	1.5
(8×2)×5=	2ndF ALPHA M × 5 =	80.
	ON/C STO M	0.
$150×3:M1	150 × 3 M+	450.
+)$250:M2 =M1+250	250 M+	250.
−)M2×5%	RCL M × 5 2ndF %	35.
M	2ndF M− RCL M	665.
$1= ¥140	140 STO Y	140.
¥33,775=$?	33775 ÷ RCL Y =	241.25
$2,750=¥?	2750 × RCL Y =	385000.
r = 3cm	3 STO Y	3.
πr² = ?	π 2ndF ALPHA	
(r → Y)	Y x² =	28.27433388
	24 ÷ (4 + 6)	
$\frac{24}{4+6}$ = 2.4...(A)	=	2.4
3×(A)+60÷(A)=	3 × 2ndF ANS + 60 ÷ 2ndF ANS =	32.2

(7)

6+4=ANS	ON/C 6 + 4 =	10.
ANS+5	+ 5 =	15.
44+37=ANS	44 + 37 =	81.
√ANS=	√ =	9.

(8) a b/c d/c

$3\frac{1}{2}+\frac{4}{3}$ = [$a\frac{b}{c}$]	ON/C 3 a b/c 1 a b/c 2 + 4 a b/c 3 =	4 ┌ 5 ┌ 6 *
→[a.xxx]	a b/c	4.833333333
→[d/c]	2ndF d/c	29 ┌ 6
$10^{\frac{2}{3}}$ =	2ndF 10ˣ 2 a b/c 3 =	4.641588834
$1.25+\frac{2}{5}$ = [a.xxx]	1.25 + 2 a b/c 5 =	1.65
→[$a\frac{b}{c}$]	a b/c	1 ┌ 13 ┌ 20
1.65	ON/C 1.65 =	1.65
→[$a\frac{b}{c}$]	a b/c	1 ┌ 13 ┌ 20
→[d/c]	2ndF d/c	33 ┌ 20
→[a.xxx]	a b/c	1.65

* 4 ┌ 5 ┌ 6=$4\frac{5}{6}$

(9) D°M'S ↔DEG

12°39'18"05	ON/C 12 D°M'S 39 D°M'S 18 D°M'S 5	
→ [10]	2ndF ↔DEG	12.65501389
123.678 → [60]	123.678 2ndF ↔DEG	123°40'40.80
3h30m45s + 6h45m36s = [60]	3 D°M'S 30 D°M'S 45 + 6 D°M'S 45 D°M'S 36 =	10°16'21.00
3h45m − 1.69h = [60]	3 D°M'S 45 − 1.69 = 2ndF ↔DEG	2°03'36.00
sin62°12'24" = [10]	sin 62 D°M'S 12 D°M'S 24 =	0.884635235

(10) →rθ →xy , ←→

(x = 6, y = 4) → (r =, θ = [°])	ON/C 6 2ndF , 4	
	2ndF →rθ [r]	7.211102551
	2ndF ←→ [θ]	33.69006753
	2ndF ←→ [r]	7.211102551
(r = 14, θ = 36[°]) → (x =, y =)	14 2ndF , 36	
	2ndF →xy [x]	11.32623792
	2ndF ←→ [y]	8.228993532
	2ndF ←→ [x]	11.32623792

(11) MDF

5÷9=ANS	ON/C 2ndF FSE 2ndF TAB 1	
ANS×9=	5 ÷ 9 =	0.6
[FIX,TAB=1]	× 9 = *1	5.0
	5 ÷ 9 = 2ndF MDF	0.6
	× 9 = *2	5.4
	2ndF FSE 2ndF FSE 2ndF FSE	

*1 5.55555555555×10⁻¹×9
*2 0.6×9

(12) MODE (STAT x)

DATA		
95	2ndF MODE 1	0.
80	95 DATA	1.
80	80 DATA	2.
75	DATA	3.
75	75 (x,y) 3 DATA	6.
75	50 DATA	7.
50		
$\bar{x}$=	RCL $\bar{x}$	75.71428571
σx=	RCL σx	12.37179148
Σx=	RCL Σx	530.
Σx²=	RCL Σx²	41200.
sx=	RCL sx	13.3630621
sx²=	RCL sx x² =	178.5714286

(13) MODE (STAT xy)

x	y		
		2ndF MODE 2	0.
2	5	2 (x,y) 5 DATA	1.
2	5	DATA	2.
12	24	12 (x,y) 24 DATA	3.
21	40	21 (x,y) 40 (x,y) 3 DATA	6.
21	40	15 (x,y) 25 DATA	7.
21	40	RCL a	1.050261097
15	25	RCL b	1.826044386
		RCL r	0.995176343
		RCL sx	8.541216597
		RCL sy	15.67223812
x=3 → y'=?		3 2ndF y'	6.528394256
y=46 → x'=?		46 2ndF x'	24.61590706

(14)

$$\bar{x} = \frac{\Sigma x}{n} \qquad \sigma x = \sqrt{\frac{\Sigma x^2 - n\bar{x}^2}{n}}$$

$$sx = \sqrt{\frac{\Sigma x^2 - n\bar{x}^2}{n-1}} \qquad \Sigma x = x_1 + x_2 + \cdots + x_n \qquad \Sigma x^2 = x_1^2 + x_2^2 + \cdots + x_n^2$$

$$\bar{y} = \frac{\Sigma y}{n} \qquad \sigma y = \sqrt{\frac{\Sigma y^2 - n\bar{y}^2}{n}}$$

$$sy = \sqrt{\frac{\Sigma y^2 - n\bar{y}^2}{n-1}} \qquad \Sigma xy = x_1y_1 + x_2y_2 + \cdots + x_ny_n \qquad \Sigma y = y_1 + y_2 + \cdots + y_n \qquad \Sigma y^2 = y_1^2 + y_2^2 + \cdots + y_n^2$$

(15)

Function Funktion Fonction Función Funzioni Functie Função Funktion Funktio 函数 함수 ฟังก์ชัน الدالة Функция Függvény Fungsi 関数	Dynamic range zulässiger Bereich Plage dynamique Rango dinámico Campi dinamici Rekencapaciteit Limite dinâmico Definitionsområde Dynaaminen ala 取值范围 역학적범위 พิสัยในการคำนวณ النطاق الديناميكي Динамический диапазон Megengedett számítási tartomány Kisaran Dinamis 計算範囲
sin x, cos x, tan x	DEG: $\lvert x \rvert < 10^{10}$ (tan x : $\lvert x \rvert \neq 90\,(2n-1)$)* RAD: $\lvert x \rvert < \frac{\pi}{180} \times 10^{10}$ (tan x : $\lvert x \rvert \neq \frac{\pi}{2}(2n-1)$)* GRAD: $\lvert x \rvert < \frac{10}{9} \times 10^{10}$ (tan x : $\lvert x \rvert \neq 100\,(2n-1)$)*
$\sin^{-1}x$, $\cos^{-1}x$	$\lvert x \rvert \leq 1$
$\tan^{-1}x$, $\sqrt[3]{x}$	$\lvert x \rvert < 10^{100}$
In x, log x	$10^{-99} \leq x < 10^{100}$
y^x	• $y > 0$: $-10^{100} < x \log y < 100$ • $y = 0$: $0 < x < 10^{100}$ • $y < 0$: $x = n$ ($0 < \lvert x \rvert < 1$: $\frac{1}{x} = 2n-1$, $x \neq 0$)*, $-10^{100} < x \log \lvert y \rvert < 100$
$\sqrt[x]{y}$	• $y > 0$: $-10^{100} < \frac{1}{x} \log y < 100$ ($x \neq 0$) • $y = 0$: $0 < x < 10^{100}$ • $y < 0$: $x = 2n-1$ ($0 < \lvert x \rvert < 1$: $\frac{1}{x} = n$, $x \neq 0$)*, $-10^{100} < \frac{1}{x} \log \lvert y \rvert < 100$
e^x	$-10^{100} < x \leq 230.2585092$
10^x	$-10^{100} < x < 100$
sinh x, cosh x, tanh x	$\lvert x \rvert \leq 230.2585092$
$\sinh^{-1} x$	$\lvert x \rvert < 10^{50}$
$\cosh^{-1} x$	$1 \leq x < 10^{50}$
$\tanh^{-1} x$	$\lvert x \rvert < 1$
x^2	$\lvert x \rvert < 10^{50}$
$\sqrt{x}$	$0 \leq x < 10^{100}$
x^{-1}	$\lvert x \rvert < 10^{100}$ ($x \neq 0$)
n!	$0 \leq n \leq 69$*
nPr	$0 \leq r \leq n \leq 9999999999$* $\frac{n!}{(n-r)!} < 10^{100}$
nCr	$0 \leq r \leq n \leq 9999999999$* $0 \leq r \leq 69$ $\frac{n!}{(n-r)!} < 10^{100}$
↔DEG, D°M'S	$0°00'00.01 \leq \lvert x \rvert < 10000°$
$x, y \rightarrow r, \theta$	$\sqrt{x^2 + y^2} < 10^{100}$
$r, \theta \rightarrow x, y$	$0 \leq r < 10^{100}$ DEG: $\lvert \theta \rvert < 10^{10}$ RAD: $\lvert \theta \rvert < \frac{\pi}{180} \times 10^{10}$ GRAD : $\lvert \theta \rvert < \frac{10}{9} \times 10^{10}$
DRG ▶	DEG→RAD, GRAD→DEG: $\lvert x \rvert < 10^{100}$ RAD→GRAD: $\lvert x \rvert < \frac{\pi}{2} \times 10^{98}$

* n, r: integer / ganze Zahlen / entier / entero / intero / geheel getal / inteiros / heltal / kokonaisluku / 整数 / 정수 / จำนวนเต็ม / عدد صحيح / целые / egész számok / bilangan bulat / 整数